

* SWBAT define and measure motion and speed

Sep 6-2:31 PM

Welcome!!!

H. Leslie Grebe

Centering...

SECA Physics
Thursday 3 October 2013

* Pick up:

- slip of paper (for later)
- Motion of a runner sheet



New people?
** Announcements

Opening Question:

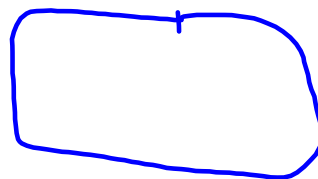
Danica Patrick gets up to speed and then does one lap around the 1-mile track in 18 seconds

Frick says her average speed is 200 mph

Frack says her average velocity is 0 mph

With whom do you agree?

Video: Math Reaction



Sep 7-7:04 AM

Catchy Physics Phrases...

Speed is
Change in distance over
change in time

$$SPEED = \frac{\Delta d}{\Delta t}$$

Velocity is
speed and **direction**

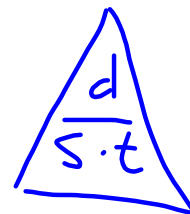
TMBG - speed and velocity

<http://www.youtube.com/watch?v=DRb5PSxJerM>

Oct 4-7:27 AM

Worksheet:

- 7 minutes on your own
- Think about the questions. At least guess!



$$s = \frac{d}{t}$$

IF I RUN 100^{=d} m AND MY SPEED
IS 5^s m/s, HOW LONG DID IT TAKE
t=?

$$t = \frac{d}{s} = \frac{100\text{m}}{5\text{m/s}} = 20\text{s}$$

Oct 5-8:33 AM

Washer demo

- Make a prediction
- Write a brief explanation

SPREAD OUT WASHERS

MADE AN EVEN SOUND ON PAN

LONGER OR FARTHER SOMETHING
FALLS, THE MORE DISTANCE
IT COVERS PER SECOND

ACCELERATION IS CHANGING
VELOCITY.

Bill Nye...

Oct 5-7:33 AM

Speed and Velocity...

What in your car tells you speed?

What in your car could tell you velocity?

Which is a vector: speed or velocity?



A horse runs 30 meters in 3 seconds. What is its speed?

$$\frac{d}{t} = \frac{30\text{m}}{3\text{s}} = 10 \frac{\text{m}}{\text{s}}$$

If a newt goes an average speed of 1 centimeter per second, how far does it go in 60 seconds?

$$d = s \cdot t = 1 \frac{\text{cm}}{\text{s}} \cdot 60\text{s} = 60\text{cm}$$

An airplane travels due north for 1000 kilometers in 2 hours. What is its velocity?

$$\frac{1000\text{km}}{2\text{hr}} = 500 \frac{\text{km}}{\text{hr}} \text{ NORTH}$$

What is the velocity if the plane travels 500 kilometers in 1 hour?

$$500 \frac{\text{km}}{\text{hr}} \text{ NORTH}$$

Oct 5-8:37 AM

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. A horse runs 30 meters in 3 seconds. What is its speed?

$10 \frac{m}{s}$

2. Which is a vector: speed or velocity?

3. Speed =

- A. distance / time
B. time / distance
C. distance x time

Sep 14-7:28 AM